Volume 299

CONTENTS

25 September 1995

Transport processes in periodic porous media. R. B. SAEGER, L. E. SCRIVEN and H. T. DAVIS *page* 1

Absolute instability of the boundary layer on a rotating disk. R. J. LINGWOOD 17

A numerical study of flow past a rotating circular cylinder using a hybrid vortex scheme. Y. T. CHEW, M. CHENG and S. C. LUO 35

Liquid-metal flow in a system of electrically coupled U-bends in a strong uniform magnetic field. SERGEI MOLOKOV and ROBERT STIEGLITZ 73

Generalization of the Forchheimer-extended Darcy flow model to the tensor permeability case via a variational principle. P. M. KNUPP and J. L. LAGE 97

Lateral capillary interaction between particles protruding from a spherical liquid layer. P. A. KRALCHEVSKY, V. N. PAUNOV and KUNIAKI NAGAYAMA 105

A gun tunnel investigation of hypersonic free shear layers in a planar duct. D. R. BUTTSWORTH, R. G. MORGAN and T. V. JONES 133

Magnetic damping of jets and vortices. P. A. DAVIDSON 153

Linear pressure waves in fogs. R. DURAISWAMI and A. PROSPERETTI 187

Drift velocity of spatially decaying waves in a two-layer viscous system. ISMAEL PIEDRA-CUEVA 217

Interfacial instabilities in plane Poiseuille flow of two stratified viscoelastic fluids with heat transfer. Part 1. Evolution equation and stability analysis. SANG W. JOO 241

A numerical study of the wave-induced solute transport above a rippled bed. K. T. SHUM 267

Vortex intensification and collapse of the Lissajous-elliptic ring: single- and multi-filament Biot-Savart simulations and visiometrics. VICTOR M. FERNANDEZ, NORMAN J. ZABUSKY and VLADIMIR M. GRYANIK 289

Particle motion in the stagnation zone of an impinging air jet. STEVEN L. ANDERSON and ELLEN K. LONGMIRE 333

On steady columnar vortices under local compression. ROBERT VERZICCO, JAVIER JIMÉNEZ and PAOLO ORLANDI 367

Non-equilibrium dissociating flow over spheres. C.-Y. WEN and H. G. HORNUNG 389

REVIEW

River Mixing, by *J. C. Rutherford* 406

INDEX TO VOLUME 299 408

SCHEDULE OF INTERNATIONAL CONFERENCES ON FLUID MECHANICS 410